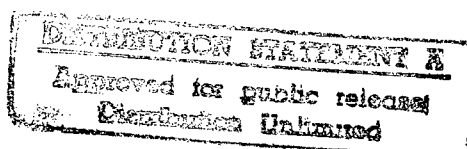


JPRS-EST-90-008  
4 MAY 1990



**FOREIGN  
BROADCAST  
INFORMATION  
SERVICE**

# ***JPRS Report***



# **Science & Technology**

***Europe***

***1990 EC GENERAL BUDGET***

**DTIC QUALITY INSPECTED 8**

REPRODUCED BY  
U.S. DEPARTMENT OF COMMERCE  
NATIONAL TECHNICAL INFORMATION SERVICE  
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## SCIENCE & TECHNOLOGY

### EUROPE

#### 1990 EC GENERAL BUDGET

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[Selection from the Final Adoption of the General Budget  
of the European Communities for the Financial Year 1990  
entitled: "EC 1990 Research and Investment Activities"  
by the European Parliament]

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| A. Total revenue .....                   | 5   |
| B. Financing of the general budget ..... | 95  |
| C. Staff .....                           | 100 |

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# RESEARCH AND INVESTMENT ACTIVITIES

**TABLE OF**

**concerning appropriations entered in Chapter 7 3 'Expenditure on research and investment'**

| Article<br>Item | Heading   | Commitment appropriations |                             |                        |            |            |
|-----------------|---|---------------------------|-----------------------------|------------------------|------------|------------|
|                 |   | 1                         | 2                           | 3                      | 4          | 5          |
|                 |   | Staff                     | Administrative<br>operation | Technical<br>operation | Investment | Contracts  |
| <b>7 3 0</b>    | <b><i>Joint Research Centre</i></b>                                 |                           |                             |                        |            |            |
| 7 3 0 0         | Expenditure in respect of persons associated with the institution   | 133 000 000               | —                           | —                      | —          | —          |
| 7 3 0 1         | Quality of life (radiation protection, environment)                 | —                         | 5 024 142                   | 3 068 472              | 3 195 633  | 3 268 753  |
| 7 3 0 2         | Modernization of industrial sectors (advanced materials, standards) | —                         | 5 943 312                   | 5 670 476              | 5 655 775  | 999 437    |
| 7 3 0 3         | Energy (fission, fusion)  | —                         | 12 592 331                  | 12 370 967             | 6 952 467  | 6 958 235  |
| 7 3 0 4         | Exploratory research  | —                         | p.m.                        | p.m.                   | p.m.       | p.m.       |
| 7 3 0 5         | Completion of the former joint programmes                           | p.m.                      | p.m.                        | p.m.                   | p.m.       | p.m.       |
| 7 3 0 6         | Support for the Commission's departments                            | —                         | 4 629 420                   | 4 855 375              | 1 800 000  | 6 215 205  |
| 7 3 0 7         | Services performed at the request of outside bodies and individuals | —                         | 2 048 034                   | 1 142 844              | 2 490 678  | 87 444     |
| 7 3 0 8         | Operation of the HFR  | —                         | p.m.                        | p.m.                   | p.m.       | p.m.       |
|                 | <i>Article 7 3 0 — Total</i>  | 133 000 000               | 30 237 239                  | 27 108 134             | 20 094 553 | 17 529 074 |
| <b>7 3 1</b>    | <b><i>Quality of life</i></b>                                       |                           |                             |                        |            |            |
| 7 3 1 1         | Medical research  | 1 198 000                 | 820 000                     | 100 000                | —          | 15 342 000 |
| 7 3 1 2         | Analysis of the human genome  | p.m.                      | p.m.                        | p.m.                   | —          | p.m.       |
| 7 3 1 3         | Radiation protection  | 2 222 000                 | 297 000                     | 220 000                | p.m.       | 14 165 000 |
| 7 3 1 4         | STEP and Epoch (environment)  | 2 444 500                 | 905 000                     | 430 000                | —          | 61 147 500 |
|                 | <i>Article 7 3 1 — Total</i>  | 5 864 500                 | 2 022 000                   | 750 000                | p.m.       | 90 654 500 |
|                 |   |                           |                             |                        |            |            |

# EQUIVALENCE

(Article 89 (3) of the Financial Regulation of 21 December 1977, as amended on 25 June 1979)

|               |             | Payment appropriations |                          |                     |            |            |               |             |
|---------------|-------------|------------------------|--------------------------|---------------------|------------|------------|---------------|-------------|
| 9             | Total       | 1                      | 2                        | 3                   | 4          | 5          | 9             | Total       |
| Reserve staff |             | Staff                  | Administrative operation | Technical operation | Investment | Contracts  | Reserve staff |             |
| 2 500 000     | 135 000 000 | 133 000 000            | —                        | —                   | —          | —          | 2 500 000     | 135 500 000 |
| —             | 14 557 000  | —                      | 4 548 064                | 2 817 015           | 2 916 776  | 2 718 145  | —             | 13 000 000  |
| —             | 18 269 000  | —                      | 5 385 324                | 4 913 528           | 4 701 752  | 794 396    | —             | 15 795 000  |
| —             | 38 874 000  | —                      | 11 430 197               | 11 383 614          | 6 432 614  | 5 107 575  | —             | 34 354 000  |
| —             | p.m.        | —                      | p.m.                     | 300 000             | p.m.       | p.m.       | —             | 300 000     |
| —             | p.m.        | p.m.                   | p.m.                     | 4 000 000           | 2 000 000  | p.m.       | —             | 6 000 000   |
| —             | 17 500 000  | —                      | 3 851 350                | 4 015 566           | 1 392 607  | 6 240 477  | —             | 15 500 000  |
| —             | 5 769 000   | —                      | 1 848 167                | 1 047 863           | 1 921 898  | 63 072     | —             | 4 881 000   |
| —             | p.m.        | —                      | p.m.                     | 200 000             | p.m.       | p.m.       | —             | 200 000     |
| 2 500 000     | 230 469 000 | 133 000 000            | 27 063 102               | 28 677 586          | 19 365 647 | 14 923 665 | 2 500 000     | 225 530 000 |
| 40 000        | 17 500 000  | 1 198 000              | 820 000                  | 100 000             | —          | 12 842 000 | 40 000        | 15 000 000  |
| p.m.          | p.m.        | p.m.                   | p.m.                     | p.m.                | —          | p.m.       | p.m.          | p.m.        |
| 96 000        | 17 000 000  | 2 222 000              | 297 000                  | 220 000             | p.m.       | 14 165 000 | 96 000        | 17 000 000  |
| 73 000        | 65 000 000  | 2 444 500              | 905 000                  | 430 000             | —          | 31 147 500 | 73 000        | 35 000 000  |
| 209 000       | 99 500 000  | 5 864 500              | 2 022 000                | 750 000             | p.m.       | 58 154 500 | 209 000       | 67 000 000  |

**TABLE OF**

**concerning appropriations entered in Chapter 7 3 'Expenditure on research and investment'**

| Article<br>Item | Heading  | Commitment appropriations |                             |                        |            |             |
|-----------------|--|---------------------------|-----------------------------|------------------------|------------|-------------|
|                 |  | 1                         | 2                           | 3                      | 4          | 5           |
|                 |  | Staff                     | Administrative<br>operation | Technical<br>operation | Investment | Contracts   |
| <b>7 3 2</b>    | <b><i>Towards a large market and an information and communications society</i></b> |                           |                             |                        |            |             |
| 7 3 2 1         | Esprit (Information technologies)  | 17 539 500                | 5 000 000                   | 2 500 000              | —          | 438 232 500 |
| 7 3 2 2         | RACE (Advanced communications technologies in Europe)                              | 5 976 000                 | 1 000 000                   | 1 500 000              | —          | 40 057 000  |
| 7 3 2 3         | Delta (Developing European learning through technological advance)                 | 644 200                   | 100 000                     | 100 000                | —          | 2 137 500   |
| 7 3 2 4         | Drive (Advanced technologies in road transport)                                    | 1 813 500                 | 300 000                     | 300 000                | —          | 21 513 000  |
| 7 3 2 5         | AIM (Advanced informatics in medicine)   | 644 200                   | 100 000                     | 100 000                | —          | 3 637 500   |
| 7 3 2 6         | Euret (transport)  | p.m.                      | p.m.                        | p.m.                   | —          | p.m.        |
|                 | <i>Article 7 3 2 — Total</i>   | 26 617 400                | 6 500 000                   | 4 500 000              | —          | 505 577 500 |
| <b>7 3 3</b>    | <b><i>Modernization of industrial sectors</i></b>                                  |                           |                             |                        |            |             |
| 7 3 3 1         | Brite (Basic technological research and application of new technologies)           | p.m.                      | p.m.                        | p.m.                   | —          | p.m.        |
| 7 3 3 2         | Brite/Euram (Industrial manufacturing technologies and advanced materials)         | 6 464 000                 | 1 450 000                   | 980 000                | —          | 145 911 000 |
| 7 3 3 3         | Aeronautical technology  | p.m.                      | p.m.                        | p.m.                   | —          | p.m.        |
| 7 3 3 4         | Primary, secondary and renewable raw materials                                     | 1 396 000                 | 210 000                     | 70 000                 | —          | 16 272 000  |
| 7 3 3 5         | CBR (Applied metrology and chemical analyses)                                      | 2 207 000                 | 865 000                     | 1 000 000              | p.m.       | 10 832 000  |
|                 | <i>Article 7 3 3 — Total</i>   | 10 067 000                | 2 525 000                   | 2 050 000              | p.m.       | 173 015 000 |

# **EQUIVALENCE**

**(Article 89 (3) of the Financial Regulation of 21 December 1977, as amended on 25 June 1979) (cont'd)**

|               |             | Payment appropriations |                          |                     |            |             |               |             |
|---------------|-------------|------------------------|--------------------------|---------------------|------------|-------------|---------------|-------------|
| 9             | Total       | 1                      | 2                        | 3                   | 4          | 5           | 9             | Total       |
| Reserve staff |             | Staff                  | Administrative operation | Technical operation | Investment | Contracts   | Reserve staff |             |
| 728 000       | 464 000 000 | 17 539 500             | 5 000 000                | 2 500 000           | —          | 329 232 500 | 728 000       | 355 000 000 |
| 267 000       | 48 800 000  | 5 976 000              | 1 000 000                | 1 500 000           | —          | 116 257 000 | 267 000       | 125 000 000 |
| 18 300        | 3 000 000   | 644 200                | 100 000                  | 100 000             | —          | 5 637 500   | 18 300        | 6 500 000   |
| 73 500        | 24 000 000  | 1 813 500              | 300 000                  | 300 000             | —          | 16 513 000  | 73 500        | 19 000 000  |
| 18 300        | 4 500 000   | 644 200                | 100 000                  | 100 000             | —          | 7 137 500   | 18 300        | 8 000 000   |
| p.m.          | p.m.        | p.m.                   | p.m.                     | p.m.                | —          | p.m.        | p.m.          | p.m.        |
| 1 105 100     | 544 300 000 | 26 617 400             | 6 500 000                | 4 500 000           | —          | 474 777 500 | 1 105 100     | 513 500 000 |
| p.m.          | p.m.        | p.m.                   | p.m.                     | p.m.                | —          | 38 000 000  | p.m.          | 38 000 000  |
| 195 000       | 155 000 000 | 6 464 000              | 1 450 000                | 980 000             | —          | 56 911 000  | 195 000       | 66 000 000  |
| p.m.          | p.m.        | p.m.                   | p.m.                     | p.m.                | —          | p.m.        | p.m.          | p.m.        |
| 52 000        | 18 000 000  | 1 396 000              | 210 000                  | 70 000              | —          | 13 272 000  | 52 000        | 15 000 000  |
| 96 000        | 15 000 000  | 2 207 000              | 865 000                  | 1 000 000           | p.m.       | 8 332 000   | 96 000        | 12 500 000  |
| 343 000       | 188 000 000 | 10 067 000             | 2 525 000                | 2 050 000           | p.m.       | 116 515 000 | 343 000       | 131 500 000 |

**TABLE OF**

**concerning appropriations entered in Chapter 73 'Expenditure on research and investment'**

| Article<br>Item | Heading   | Commitment appropriations |                             |                        |            |             |
|-----------------|---|---------------------------|-----------------------------|------------------------|------------|-------------|
|                 |   | 1                         | 2                           | 3                      | 4          | 5           |
|                 |   | Staff                     | Administrative<br>operation | Technical<br>operation | Investment | Contracts   |
| <b>734</b>      | <b><i>Exploitation and optimum use of biological resources</i></b>                                |                           |                             |                        |            |             |
| 7341            | Bridge (Biotechnology)  | 2 007 000                 | 825 000                     | 222 500                | —          | 26 868 500  |
| 7342            | Eclair (European collaborative linkage of agriculture and industry through research)              | 1 171 000                 | 830 000                     | 136 000                | —          | 22 125 000  |
| 7343            | Flair (Food-linked agro-industrial research)  | 419 500                   | 610 000                     | 63 500                 | —          | 9 896 000   |
| 7344            | Competitiveness of agriculture and management of agricultural resources (research in agriculture) | p.m.                      | p.m.                        | p.m.                   | —          | p.m.        |
|                 | <i>Article 734 — Total</i>  | 3 597 500                 | 2 265 000                   | 422 000                | —          | 58 889 500  |
| <b>735</b>      | <b><i>Energy</i></b>  |                           |                             |                        |            |             |
| 7351            | Fission — Management and storage of radioactive waste   | 874 000                   | 87 000                      | p.m.                   | —          | p.m.        |
| 7352            | Fission — Decommissioning of nuclear power stations   | 430 500                   | 75 000                      | 60 000                 | —          | 11 918 500  |
| 7353            | Teleman (Remote handling in hostile and disorganized environments)                                | 260 000                   | 108 000                     | 33 000                 | —          | 8 192 000   |
| 7354            | Thermonuclear fusion — General programme  | 9 267 000                 | 370 000                     | 500 000                |            | 102 473 000 |
| 7355            | Thermonuclear fusion — Participation in the JET joint undertaking                                 | p.m.                      | p.m.                        | p.m.                   | —          | 79 000 000  |
| 7356            | Joule (Non-nuclear energy)  | 3 132 000                 | 900 000                     | 450 000                | —          | 85 407 000  |
|                 | <i>Article 735 — Total</i>  | 13 963 500                | 1 540 000                   | 1 043 000              | —          | 286 990 500 |
| <b>736</b>      | <b><i>Science and technology for development</i></b>  |                           |                             |                        |            |             |
| 7361            | Science and technology for development  | 1 494 000                 | 115 000                     | 137 500                | —          | 12 198 500  |
|                 | <i>Article 736 — Total</i>  | 1 494 000                 | 115 000                     | 137 500                | —          | 12 198 500  |



# EQUIVALENCE

(Article 89 (3) of the Financial Regulation of 21 December 1977, as amended on 25 June 1979) (cont'd)

|               |             | Payment appropriations |                          |                     |            |             |               |             |
|---------------|-------------|------------------------|--------------------------|---------------------|------------|-------------|---------------|-------------|
| 9             | Total       | 1                      | 2                        | 3                   | 4          | 5           | 9             | Total       |
| Reserve staff |             | Staff                  | Administrative operation | Technical operation | Investment | Contracts   | Reserve staff |             |
| 77 000        | 30 000 000  | 2 007 000              | 825 000                  | 222 500             | —          | 14 868 500  | 77 000        | 18 000 000  |
| 38 000        | 24 300 000  | 1 171 000              | 830 000                  | 136 000             | —          | 13 825 000  | 38 000        | 16 000 000  |
| 11 000        | 11 000 000  | 419 500                | 610 000                  | 63 500              | —          | 2 896 000   | 11 000        | 4 000 000   |
| p.m.          | p.m.        | p.m.                   | p.m.                     | p.m.                | —          | 6 000 000   | p.m.          | 6 000 000   |
| 126 000       | 65 300 000  | 3 597 500              | 2 265 000                | 422 000             | —          | 37 589 500  | 126 000       | 44 000 000  |
| 39 000        | 1 000 000   | 874 000                | 87 000                   | p.m.                | —          | 7 500 000   | 39 000        | 8 500 000   |
| 16 000        | 12 500 000  | 430 500                | 75 000                   | 60 000              | —          | 6 418 500   | 16 000        | 7 000 000   |
| 7 000         | 8 600 000   | 260 000                | 108 000                  | 33 000              | —          | 2 892 000   | 7 000         | 3 300 000   |
| 390 000       | 113 000 000 | 9 267 000              | 370 000                  | 500 000             | —          | 112 973 000 | 390 000       | 123 500 000 |
| p.m.          | 79 000 000  | p.m.                   | p.m.                     | p.m.                | —          | 79 000 000  | p.m.          | 79 000 000  |
| 111 000       | 90 000 000  | 3 132 000              | 900 000                  | 450 000             | —          | 55 407 000  | 111 000       | 60 000 000  |
| 563 000       | 304 100 000 | 13 963 500             | 1 540 000                | 1 043 000           | —          | 264 190 500 | 563 000       | 281 300 000 |
| 55 000        | 14 000 000  | 1 494 000              | 115 000                  | 137 500             | —          | 20 198 500  | 55 000        | 22 000 000  |
| 55 000        | 14 000 000  | 1 494 000              | 115 000                  | 137 500             | —          | 20 198 500  | 55 000        | 22 000 000  |

**TABLE OF**

**concerning appropriations entered in Chapter 7 3 'Expenditure on research and investment'**

| Article<br>Item | Heading  | Commitment appropriations |                             |                        |            |            |
|-----------------|--|---------------------------|-----------------------------|------------------------|------------|------------|
|                 |  | 1                         | 2                           | 3                      | 4          | 5          |
|                 |  | Staff                     | Administrative<br>operation | Technical<br>operation | Investment | Contracts  |
| 7 3 7           | <i>Exploitation of the sea-bed and optimum use of marine resources</i>   |                           |                             |                        |            |            |
| 7 3 7 1         | MAST (Marine research)   | 864 000                   | 365 000                     | 250 000                | —          | 31 501 500 |
| 7 3 7 2         | Fisheries research programme   | 658 000                   | 80 000                      | 80 000                 | —          | 5 664 000  |
|                 | <i>Article 7 3 7 — Total</i>   | 1 522 000                 | 445 000                     | 330 000                | —          | 37 165 500 |
| 7 3 8           | <i>Improvements to European scientific and technical cooperation</i>   |                           |                             |                        |            |            |
| 7 3 8 1         | Science (Stimulation — strengthening European scientific and technical potential)                                    | 1 524 000                 | 190 000                     | 177 000                | —          | 33 050 000 |
| 7 3 8 2         | SPES (Stimulation plan for economic sciences)  | 126 500                   | 32 500                      | 10 000                 | —          | 1 826 000  |
| 7 3 8 3         | Scientific awards  | p.m.                      | p.m.                        | p.m.                   | —          | p.m.       |
| 7 3 8 4         | Support for major facilities   | 343 000                   | 110 000                     | 57 000                 | —          | 7 480 000  |
| 7 3 8 5         | Monitor (SAST, FAST and Spear), Strategic analysis, forecasting and evaluation in matters of research and technology | 2 089 500                 | 1 220 500                   | 120 000                | —          | 5 195 000  |
| 7 3 8 7         | Doses (Development of expert systems for statistics)   | 99 000                    | 20 000                      | p.m.                   | —          | 1 625 000  |
| 7 3 8 8         | Value (Dissemination and utilization of scientific and technological results)  | 1 225 000                 | 200 000                     | 200 000                | —          | 8 475 000  |
| 7 3 8 9         | Eurotra (Machine translation system)   | 100 000                   | 75 000                      | 75 000                 | —          | 2 100 000  |
|                 | <i>Article 7 3 8 — Total</i>   | 5 507 000                 | 1 848 000                   | 639 000                | —          | 59 751 000 |

# **EQUIVALENCE**

**(Article 89 (3) of the Financial Regulation of 21 December 1977, as amended on 25 June 1979) (cont'd)**

|               |            | Payment appropriations |                          |                     |            |            |               |            |
|---------------|------------|------------------------|--------------------------|---------------------|------------|------------|---------------|------------|
| 9             | Total      | 1                      | 2                        | 3                   | 4          | 5          | 9             | Total      |
| Reserve staff |            | Staff                  | Administrative operation | Technical operation | Investment | Contracts  | Reserve staff |            |
| 19 500        | 33 000 000 | 864 000                | 365 000                  | 250 000             | —          | 9 501 500  | 19 500        | 11 000 000 |
| 18 000        | 6 500 000  | 658 000                | 80 000                   | 80 000              | —          | 5 664 000  | 18 000        | 6 500 000  |
| 37 500        | 39 500 000 | 1 522 000              | 445 000                  | 330 000             | —          | 15 165 500 | 37 500        | 17 500 000 |
| 59 000        | 35 000 000 | 1 524 000              | 190 000                  | 177 000             | —          | 34 700 000 | 59 000        | 36 650 000 |
| 5 000         | 2 000 000  | 126 500                | 32 500                   | 10 000              | —          | 626 000    | 5 000         | 800 000    |
| p.m.          | p.m.       | p.m.                   | p.m.                     | p.m.                | —          | p.m.       | p.m.          | p.m.       |
| 10 000        | 8 000 000  | 343 000                | 110 000                  | 57 000              | —          | 3 480 000  | 10 000        | 4 000 000  |
| 75 000        | 8 700 000  | 2 089 500              | 1 220 500                | 120 000             | —          | 2 395 000  | 75 000        | 5 900 000  |
| 1 000         | 1 745 000  | 99 000                 | 20 000                   | p.m.                | —          | 1 325 000  | 1 000         | 1 445 000  |
| 50 000        | 10 150 000 | 1 225 000              | 200 000                  | 200 000             | —          | 3 325 000  | 50 000        | 5 000 000  |
| p.m.          | 2 350 000  | 100 000                | 75 000                   | 75 000              | —          | 3 650 000  | p.m.          | 3 900 000  |
| 200 000       | 67 945 000 | 5 507 000              | 1 848 000                | 639 000             | —          | 49 501 000 | 200 000       | 57 695 000 |

## TABLE OF

| Article<br>Item | Heading  | Commitment appropriations |                             |                        |            |               |
|-----------------|--|---------------------------|-----------------------------|------------------------|------------|---------------|
|                 |  | 1                         | 2                           | 3                      | 4          | 5             |
|                 |  | Staff                     | Administrative<br>operation | Technical<br>operation | Investment | Contracts     |
| 739             | <i>Shared-cost activities outside the Framework Programme for 1987 to 1991</i>   |                           |                             |                        |            |               |
| 7390            | Preparation, studies and coordination of national policies   | 474 000                   | 259 000                     | 98 000                 | —          | 4 664 000     |
| 7391            | General reserve for the third Framework Programme, including supplementary programmes, the development of HDTV, the exploration and exploitation of C <sub>4</sub> grasses for non-alimentary biomass production, the service infrastructure action plan and agroindustrial demonstration projects | p.m.                      | p.m.                        | p.m.                   | —          | p.m.          |
| 7393            | Research and development in the application of new technologies to libraries   | 50 000                    | 20 000                      | 30 000                 | —          | 1 900 000     |
| 7394            | International cooperation and COST   | 1 566 500                 | 452 500                     | 147 500                | —          | 17 796 500    |
| 7395            | Technological problems of nuclear safety (codes and standards)   | 656 000                   | 132 000                     | 50 000                 | —          | 736 000       |
| 7396            | Research staff placed at the disposal of outside bodies in accordance with Article 6 (c) of the EAEC Treaty  | 384 000                   | p.m.                        | p.m.                   | —          | —             |
| 7397            | Support for other policies   | p.m.                      | 180 000                     | 20 000                 | —          | 2 500 000     |
| 7398            | Completion of previous shared-cost programmes  | p.m.                      | p.m.                        | p.m.                   | —          | —             |
| 7399            | Scientific and technical activities relating to the common agricultural policy   | p.m.                      | p.m.                        | p.m.                   | —          | 1 000 000     |
|                 | <i>Article 739 — Total</i>   | 3 130 500                 | 1 043 500                   | 345 500                | —          | 28 596 500    |
|                 |  |                           |                             |                        |            |               |
|                 | <i>Articles 731 to 739 — Total</i>   | 71 763 400                | 18 303 500                  | 10 217 000             | p.m.       | 1 252 838 500 |

# EQUIVALENCE

(Article 89 (3) of the Financial Regulation of 21 December 1977, as amended on 25 June 1979) (cont'd)

|               |               | Payment appropriations |                          |                     |            |               |               |               |
|---------------|---------------|------------------------|--------------------------|---------------------|------------|---------------|---------------|---------------|
| 9             | Total         | 1                      | 2                        | 3                   | 4          | 5             | 9             | Total         |
| Reserve staff |               | Staff                  | Administrative operation | Technical operation | Investment | Contracts     | Reserve staff |               |
| 5 000         | 5 500 000     | 474 000                | 259 000                  | 98 000              | —          | 3 164 000     | 5 000         | 4 000 000     |
| p.m.          | p.m.          | p.m.                   | p.m.                     | p.m.                | —          | p.m.          | p.m.          | p.m.          |
| p.m.          | 2 000 000     | 50 000                 | 20 000                   | 30 000              | —          | 400 000       | p.m.          | 500 000       |
| 37 000        | 20 000 000    | 1 566 500              | 452 500                  | 147 500             | —          | 10 796 500    | 37 000        | 13 000 000    |
| 26 000        | 1 600 000     | 656 000                | 132 000                  | 50 000              | —          | 836 000       | 26 000        | 1 700 000     |
| 16 000        | 400 000       | 384 000                | p.m.                     | p.m.                | —          | 150 000       | 16 000        | 550 000       |
| p.m.          | 2 700 000     | p.m.                   | 180 000                  | 20 000              | p.m.       | 1 500 000     | p.m.          | 1 700 000     |
| p.m.          | p.m.          | p.m.                   | p.m.                     | p.m.                | —          | 400 000       | p.m.          | 400 000       |
| p.m.          | 1 000 000     | p.m.                   | p.m.                     | p.m.                | —          | 600 000       | p.m.          | 600 000       |
| 84 000        | 33 200 000    | 3 130 500              | 1 043 500                | 345 500             | —          | 17 846 500    | 84 000        | 22 450 000    |
|               |               |                        |                          |                     |            |               |               |               |
|               |               |                        |                          |                     |            |               |               |               |
|               |               |                        |                          |                     |            |               |               |               |
|               |               |                        |                          |                     |            |               |               |               |
| 2 722 600     | 1 355 845 000 | 71 763 400             | 18 303 500               | 10 217 000          | p.m.       | 1 053 938 500 | 2 722 600     | 1 156 945 000 |

**MULTIANNUAL SCHEDULE OF COMMITMENTS AND PAYMENTS  
BY RESEARCH OBJECTIVES**

| Article Item | Heading   |    | Duration of action       | Total programme allocation (proposed or adopted) | Date of Decision (or proposal) and Official Journal (or document) reference  |
|--------------|---|----|--------------------------|--|--|
| 7 3 1        | <i>Quality of life</i>  |    |                          |  |  |
| 7 3 1 1      | Medical research  |    | 1987-1991                | 65 000 000                                       | 17 November 1987 (OJ No L 334, 24. 11. 1987)   |
| 7 3 1 2      | Analysis of the human genome  |    | 1989-1991                | 15 000 000                                       | Proposal of 27 July 1988 (OJ No C 27, 2. 2. 1989)<br>Amended proposal of 17 November 1989 (OJ No C 303, 2. 12. 1989)<br>Common position of the Council of 18 December 1989 |
| 7 3 1 3      | Radiation protection  | CP | 1985-1989                | 68 000 000                                       | 12 March 1985 (OJ No L 83, 25. 3. 1985)<br>21 December 1987 (OJ No L 16, 21. 1. 1988)  |
|              |   | NP | 1990-1991                | 21 200 000                                       | 20 June 1989 (OJ No L 200, 13. 7. 1989)  |
| 7 3 1 4      | STEP and Epoch (environment)  | OP | 1981-1985                | 49 300 000                                       | 3 March 1981 (OJ No L 101, 11. 4. 1981)<br>1 March 1984 (OJ No L 71, 14. 3. 1984) and corrigendum (OJ No L 101, 13. 4. 1984)   |
|              |   | CP | 1986-1990                | 75 000 000                                       | 10 June 1986 (OJ No L 159, 14. 6. 1986)  |
|              |   | NP | 1989-1992                | 115 000 000                                      | 20 November 1989 (OJ No L 359, 8. 12. 1989)  |
| 7 3 2        | <i>Towards a large market and an information and communications society</i> |    |                          |  |  |
| 7 3 2 1      | Esprit (Information technologies)   | OP | 1984-1988                | 750 000 000                                      | 28 February 1984 (OJ No L 67, 9. 3. 1984)  |
|              |   | CP | 1. 12. 1987-30. 11. 1992 | 1 600 000 000                                    | 11 April 1988 (OJ No L 118, 6. 5. 1988)  |
| 7 3 2 2      | RACE (Advanced communications technologies in Europe)                       | OP | 1. 7. 1985-31. 12. 1986  | 14 000 000                                       | 25 July 1985 (OJ No L 210, 7. 8. 1985)   |
|              |   | CP | 1. 6. 1987-31. 5. 1992   | 550 000 000                                      | 14 December 1987 (OJ No L 16, 21. 1. 1988)   |
| 7 3 2 3      | Delta (Developing European learning through technological advance)          |    | 1. 6. 1988-31. 5. 1990   | 20 000 000                                       | 29 June 1988 (OJ No L 206, 30. 7. 1988)  |

OP = Old programme.

CP = Current programme.

NP = New programme.

**MULTIANNUAL SCHEDULE OF COMMITMENTS AND PAYMENTS**  
**BY RESEARCH OBJECTIVES (cont'd)**

| Article Item | Heading  | Duration of action     | Total programme allocation (proposed or adopted) | Date of Decision (or proposal) and Official Journal (or document) reference          |
|--------------|--|------------------------|--|--|
| 7 3 2 4      | Drive (Advanced technologies in road transport)                            | 1. 6. 1988-31. 5. 1991 | 60 000 000                                       | 29 June 1988 (OJ No L 206, 30. 7. 1988)  |
| 7 3 2 5      | AIM (Advanced informatics in medicine)                                     | 1. 6. 1988-31. 5. 1990 | 20 000 000                                       | 4 November 1988 (OJ No L 314, 22. 11. 1988)  |
| 7 3 2 6      | Euret (transport)  | ...                    | ...  | Proposal of 28 November 1989 (OJ No C 318, 20. 12. 1989)                             |
| 7 3 3        | <b>Modernization of industrial sectors</b>                                 |                        |  |  |
| 7 3 3 1      | Brite (Basic technological research and application of new technologies)   | 1985-1988              | 185 000 000                                      | 12 March 1985 (OJ No L 83, 25. 3. 1985)<br>29 February 1988 (OJ No L 59, 4. 3. 1988) |
| 7 3 3 2      | Brite/Euram (Industrial manufacturing technologies and advanced materials) | 1989-1992              | 499 500 000                                      | 14 March 1989 (OJ No L 98, 11. 4. 1989)  |
| 7 3 3 4      | Primary, secondary and renewable raw materials                             | OP                     | 1982-1985  | 54 000 000   |
|              |  | CP                     | 1986-1989  | 70 000 000   |
|              |  | NP                     | 1990-1992  | 45 000 000   |
| 7 3 3 5      | CBR (Applied metrology and chemical analyses)                              | OP                     | 1983-1987  | 25 000 000   |
|              |  | NP                     | 1988-1992  | 59 200 000   |

OP = Old programme.  
CP = Current programme.  
NP = New programme.

**MULTIANNUAL SCHEDULE OF COMMITMENTS AND PAYMENTS**  
**BY RESEARCH OBJECTIVES (cont'd)**

| Article<br>Item | Heading   |    | Duration of action     | Total<br>programme<br>allocation<br>(proposed<br>or adopted) | Date of Decision (or proposal)<br>and Official Journal<br>(or document) reference  |
|-----------------|---|----|------------------------|--|--|
| 734             | <b>Exploitation and optimum use of<br/>biological resources</b>   |    |                        |  |  |
| 7341            | Bridge (Biotechnology)  | CP | 1985-1989              | 75 000 000   | 12 March 1985 (OJ No L 83,<br>25. 3. 1985)<br>29 June 1988 (OJ No L 206,<br>30. 7. 1988)   |
|                 |   | NP | 1990-1994              | 100 000 000  | 27 November 1989 (OJ No L 360,<br>9. 12. 1989)   |
| 7342            | Eclair (European collaborative lin-<br>kage of agriculture and industry<br>through research)            |    | 1. 7. 1988-30. 6. 1993 | 80 000 000   | 23 February 1989 (OJ No L 60,<br>3. 3. 1989)   |
| 7343            | Flair (Food-linked agro-industrial<br>research)   |    | 1. 7. 1989-30. 6. 1993 | 25 000 000   | 20 June 1989 (OJ No L 200,<br>13. 7. 1989)   |
| 7344            | Competitiveness of agriculture and<br>management of agricultural resources<br>(research in agriculture) | OP | 1984-1988              | 30 000 000   | 12 December 1983 (OJ No L 358,<br>22. 12. 1983)  |
|                 |   | NP | 1989-1993              | 55 000 000   | Proposal of 20 September 1988 (OJ<br>No C 146, 13. 6. 1989)<br>Amendment of 16 October 1989 (OJ<br>No C 284, 10. 11. 1989)<br>Common position of the Council of<br>17 October 1989 |
| 735             | <b>Energy</b>   |    |                        |  |  |
| 7351            | Fission — Management and storage<br>of radioactive waste  | CP | 1985-1989              | 62 000 000   | 12 March 1985 (OJ No L 83,<br>25. 3. 1985)   |
|                 |   | NP | 1990-1994              | 79 600 000   | 15 December 1989 (OJ No L 395,<br>30. 12. 1989)  |
| 7352            | Fission — Decommissioning of<br>nuclear power stations  | OP | 1984-1988              | 12 100 000   | 31 January 1984 (OJ No L 36,<br>8. 2. 1984)  |
|                 |   | NP | 1989-1993              | 31 500 000   | 14 March 1989 (OJ No L 98,<br>11. 4. 1989)   |
| 7353            | Teleman (Remote handling in hostile<br>and disorganized environments)                                   |    | 1989-1993              | 19 000 000   | 18 July 1989 (OJ No L 226,<br>3. 8. 1989)  |

OP = Old programme.  
CP = Current programme.  
NP = New programme.



**MULTIANNUAL SCHEDULE OF COMMITMENTS AND PAYMENTS  
BY RESEARCH OBJECTIVES (cont'd)**

| Article Item | Heading  |    | Duration of action      | Total programme allocation (proposed or adopted) | Date of Decision (or proposal) and Official Journal (or document) reference |
|--------------|--|----|-------------------------|--|---|
| 7 3 5 4      | Thermonuclear fusion — General programme                               | CP | 1985-1989               | 360 000 000                                      | 12 March 1985 (OJ No L 83, 25. 3. 1985)                                     |
|              |  | NP | 1. 1. 1988-31. 3. 1992  | 406 000 000                                      | 25 July 1988 (OJ No L 222, 12. 8. 1988)                                     |
| 7 3 5 5      | Thermonuclear fusion — Participation in the JET joint undertaking      | CP | 1985-1989               | 330 000 000                                      | 12 March 1985 (OJ No L 83, 25. 3. 1985)                                     |
|              |  | NP | 1. 1. 1988-31. 3. 1992  | 329 000 000                                      | 25 July 1988 (OJ No L 222, 12. 8. 1988)                                     |
| 7 3 5 6      | Joule (Non-nuclear energy)   | OP | 1985-1988               | 175 000 000                                      | 12 March 1985 (OJ No L 83, 25. 3. 1985)                                     |
|              |  | CP | 1. 1. 1989-31. 3. 1992  | 122 000 000                                      | 14 March 1989 (OJ No L 98, 11. 4. 1989)                                     |
| 7 3 6        | <i>Science and technology for development</i>                          |    |                         |  |   |
| 7 3 6 1      | Science and technology for development                                 | OP | 1983-1986               | 40 000 000                                       | 3 December 1982 (OJ No L 352, 14. 12. 1982)                                 |
|              |  | CP | 1987-1991               | 80 000 000                                       | 14 December 1987 (OJ No L 355, 17. 12. 1987)                                |
| 7 3 7        | <i>Exploitation of the sea-bed and optimum use of marine resources</i> |    |                         |  |   |
| 7 3 7 1      | MAST (Marine research)   |    | 28. 6. 1989-27. 6. 1992 | 50 000 000                                       | 20 June 1989 (OJ No L 200, 13. 7. 1989)                                     |
| 7 3 7 2      | Fisheries research programme   |    | 1988-1992               | 30 000 000                                       | 19 October 1987 (OJ No L 314, 4. 11. 1987)                                  |

OP = Old programme.  
CP = Current programme.  
NP = New programme.



**MULTIANNUAL SCHEDULE OF COMMITMENTS AND PAYMENTS**  
**BY RESEARCH OBJECTIVES (cont'd)**

| Article<br>Item | Heading   | Duration of action      | Total<br>programme<br>allocation<br>(proposed<br>or adopted) | Date of Decision (or proposal)<br>and Official Journal<br>(or document) reference |
|-----------------|---|-------------------------|--|---|
| <b>7 3 8</b>    | <b><i>Improvements to European scientific<br/>and technical cooperation</i></b>   |                         |  |   |
| <b>7 3 8 1</b>  | Science (Stimulation — strengthening<br>European scientific and technical<br>potential)                                       |                         |  |   |
|                 | OP  | 1983-1984               | 7 000 000  | 28 June 1983 (OJ No L 181,<br>6. 7. 1983)   |
|                 | CP  | 1985-1988               | 60 000 000   | 12 March 1985 (OJ No L 83,<br>25. 3. 1985)  |
|                 | NP  | 1988-1992               | 167 000 000  | 29 June 1988 (OJ No L 206,<br>30. 7. 1988)  |
| <b>7 3 8 2</b>  | SPES (Stimulation plan for economic<br>sciences)  | 1989-1992               | 6 000 000  | 13 February 1989 (OJ No L 44,<br>16. 2. 1989)                                     |
| <b>7 3 8 4</b>  | Support for major facilities  | 1988-1992               | 30 000 000   | 14 March 1989 (OJ No L 98,<br>11. 4. 1989)  |
| <b>7 3 8 5</b>  | Monitor (SAST, FAST and Spear),<br>Strategic analysis, forecasting and<br>evaluation in matters of research and<br>technology | 27. 6. 1989-26. 6. 1993 | 22 000 000   | 20 June 1989 (OJ No L 200,<br>13. 7. 1989)  |
| <b>7 3 8 7</b>  | Doses (Development of expert sys-<br>tems for statistics)   | 20. 6. 1989-19. 6. 1993 | 4 000 000  | 20 June 1989 (OJ No L 200,<br>13. 7. 1989)  |
| <b>7 3 8 8</b>  | Value (Dissemination and utilization<br>of scientific and technological<br>results)   | 27. 6. 1989-26. 6. 1993 | 38 000 000   | 20 June 1989 (OJ No L 200,<br>13. 7. 1989)  |
| <b>7 3 8 9</b>  | Eurotra (Machine translation system)  |                         |  |   |
|                 | CP  | 1989-1990               | 7 000 000  | 20 June 1989 (OJ No L 200,<br>13. 7. 1989)  |
|                 | NP  | 1. 7. 1990-1. 7. 1992   | 10 000 000   | 15 December 1989 (OJ No C 7,<br>12. 1. 1990)                                      |

OP = Old programme.  
CP = Current programme.  
NP = New programme.

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading   | Commitment appropriations |                            |         |         |
|-----------------|---|---------------------------|----------------------------|---------|---------|
|                 |   | 1988 to 1991 programme    |                            |         |         |
|                 | Objective   | 1988                      | 1989                       | 1990    | 1991    |
| 730             | <b>Joint Research Centre</b>  |                           |                            |         |         |
| 7300            | Expenditure in respect of persons associated with the institution :   |                           |                            |         |         |
|                 | — staff assigned to the Framework Programme                           | 108 719                   | 101 493                    | 102 982 | 105 806 |
|                 | — staff outside the Framework Programme                               | 16 073                    | 30 507                     | 32 518  | 36 902  |
|                 | Item 7300 — Total   | 124 792                   | 132 000                    | 135 500 | 142 708 |
| 7301            | Quality of life (radiation protection, environment) :                 |                           |                            |         |         |
|                 | — radiation protection  | 951                       | p.m.                       | p.m.    | p.m.    |
|                 | — environment   | 11 902                    | 13 400                     | 14 557  | 13 077  |
|                 | Item 7301 — Total   | 12 853                    | 13 400                     | 14 557  | 13 077  |
| 7302            | Modernization of industrial sectors (advanced materials, standards) : |                           |                            |         |         |
|                 | — advanced materials  | 6 110                     | 5 100                      | 5 010   | 4 862   |
|                 | — standards   | 9 138                     | 14 500                     | 13 259  | 13 158  |
|                 | Item 7302 — Total   | 15 248                    | 19 600<br>( <sup>1</sup> ) | 18 269  | 18 020  |
| 7303            | Energy (fission, fusion) :  |                           |                            |         |         |
|                 | — fission   | 29 803                    | 32 700                     | 33 929  | 31 557  |
|                 | — fusion  | 9 128                     | 7 400                      | 4 945   | 4 223   |
|                 | Item 7303 — Total   | 38 931                    | 40 100                     | 38 874  | 35 780  |
|                 |   |                           |                            |         |         |

(<sup>1</sup>) Including appropriations carried over from 1988.

AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

(ECU 1 000)

| Payment appropriations |         |               |         |         |        |         |
|------------------------|---------|---------------|---------|---------|--------|---------|
| 1988 to 1991 programme |         |               |         |         |        |         |
| Total                  | 1988    | 1989          | 1990    | 1991    | 1992   | Total   |
| 419 000                | 104 161 | 101 493       | 102 982 | 105 806 | 4 558  | 419 000 |
| 116 000                | 15 391  | 30 507        | 32 518  | 36 902  | 682    | 116 000 |
| 535 000                | 119 552 | 132 000       | 135 500 | 142 708 | 5 240  | 535 000 |
| 951                    | 341     | 399           | p.m.    | 211     | p.m.   | 951     |
| 52 936                 | 4 137   | 12 095        | 13 000  | 12 995  | 10 709 | 52 936  |
| 53 887                 | 4 478   | 12 494<br>(1) | 13 000  | 13 206  | 10 709 | 53 887  |
| 21 082                 | 2 742   | 5 903         | 4 309   | 4 319   | 3 809  | 21 082  |
| 50 055                 | 4 555   | 11 236        | 11 486  | 13 165  | 9 613  | 50 055  |
| 71 137                 | 7 297   | 17 139<br>(1) | 15 795  | 17 484  | 13 422 | 71 137  |
| 127 989                | 15 474  | 29 178        | 28 503  | 31 678  | 23 156 | 127 989 |
| 25 696                 | 2 936   | 9 950         | 5 851   | 4 211   | 2 748  | 25 696  |
| 153 685                | 18 410  | 39 128<br>(1) | 34 354  | 35 889  | 25 904 | 153 685 |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item                          | Heading              | Commitment appropriations |         |         |         |
|--|----------------------|---------------------------|---------|---------|---------|
|  |                      | 1988 to 1991 programme    |         |         |         |
|  | Objective            | 1988                      | 1989    | 1990    | 1991    |
| 7304                                     | Exploratory research | 2 291                     | p.m.    | p.m.    | p.m.    |
| <i>Framework Programme (JRC) — Total</i> |                      | 178 042                   | 174 593 | 174 682 | 172 683 |

(1) Balance of cover in payments following transfer No 2/1988.

**AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)**

(1 000 ECU)

| Payment appropriations |         |         |         |            |        |         |
|------------------------|---------|---------|---------|------------|--------|---------|
| 1988 to 1991 programme |         |         |         |            |        |         |
| Total                  | 1988    | 1989    | 1990    | 1991       | 1992   | Total   |
| 2 291                  | 754     | 546     | 300     | 691<br>(1) | p.m.   | 2 291   |
| 700 000                | 135 100 | 170 800 | 166 431 | 173 076    | 54 593 | 700 000 |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading   | Commitments           |                     |                              |                             |            |             |                                 |
|-----------------|---|-----------------------|---------------------|------------------------------|-----------------------------|------------|-------------|---------------------------------|
|                 |   | u.a./EUA/<br>ECU      | ECU                 |                              |                             |            |             |                                 |
|                 |   | < 1987 <sup>(1)</sup> | 1988 <sup>(2)</sup> | 1989 <sup>(3)</sup>          | 1990                        | 1991       | 1992        | 1993 and<br>subsequent<br>years |
| 731             | <i>Quality of life</i>  |                       |                     |                              |                             |            |             |                                 |
| 7311            | Medical research  | 11 354 052            | 21 124 471          | 14 000 000<br><sup>(6)</sup> | 17 500 000                  | 1 021 477  | p.m.        | —                               |
| 7312            | Analysis of the human genome  | —                     | —                   | p.m.<br><sup>(7)</sup>       | 6 000 000<br><sup>(8)</sup> | p.m.       | p.m.        | p.m.                            |
| 7313            | Radiation protection  | CP 48 226 253         | 13 089 865          | 6 500 000                    | p.m.                        | p.m.       | p.m.        | p.m.                            |
|                 |   | NP —                  | —                   | —                            | 17 000 000                  | 4 200 000  | p.m.        | p.m.                            |
| 7314            | STEP and Epoch (environment)  | OP 46 757 849         | 476 489             | 34 308                       | p.m.                        | —          | —           | —                               |
|                 |   | CP 51 444 885         | 16 340 216          | 3 000 000                    | 4 214 899                   | p.m.       | p.m.        | p.m.                            |
|                 |   | NP —                  | —                   | 10 500 000                   | 60 785 101                  | 18 714 899 | 25 000 000  | p.m.                            |
| 732             | <i>Towards a large market and an<br/>information and communications<br/>society</i> |                       |                     |                              |                             |            |             |                                 |
| 7321            | Esprit (Information technologies)   | OP 699 401 859        | 50 598 141          | p.m.                         | —                           | —          | —           | —                               |
|                 |   | CP —                  | 275 926 074         | 465 000 000                  | 464 000 000                 | 65 073 926 | 330 000 000 | p.m.                            |
| 7322            | RACE (Advanced communica-<br>tions technologies in Europe)                          | 173 617 966           | 80 277 246          | 150 820 000                  | 48 800 000                  | 10 284 788 | 86 200 000  | p.m.                            |

OP = Old programme.

CP = Current programme.

NP = New programme.

<sup>(1)</sup> Final commitments (including cancellation of commitments making appropriations available again).

<sup>(2)</sup> Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

<sup>(3)</sup> Including commitment appropriations remaining from 1988.

<sup>(4)</sup> Outturn.

<sup>(5)</sup> Including payment appropriations carried over from 1988.

<sup>(6)</sup> Including transfer No 18 F (ECU 2 million).

<sup>(7)</sup> Excluding transfer No 18 F (ECU 2 million from Chapter 10 0).

<sup>(8)</sup> This appropriation is entered in Chapter 10 0.

<sup>(9)</sup> The schedule does not give detailed budget forecasts for programmes being prepared (7333 and 7383) or proposed (7312, 7326, 7344 and 7389).

<sup>(10)</sup> Including appropriations carried over from 1988 and transfer No 18 J (ECU 2 500 000).

<sup>(11)</sup> Including transfer No 18 J (ECU 2 500 000).

<sup>(12)</sup> Including transfer No 18 J (ECU 40 million).



AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

|               |                  | Payments    |                     |                    |             |             |                                 |               |
|---------------|------------------|-------------|---------------------|--------------------|-------------|-------------|---------------------------------|---------------|
| Total         | u.a./EUA/<br>ECU | ECU         |                     |                    |             |             |                                 | Total         |
|               | < 1987 (4)       | 1988 (4)    | 1989 (5)            | 1990               | 1991        | 1992        | 1993 and<br>subsequent<br>years |               |
| 65 000 000    | 1 587 603        | 10 633 537  | 13 700 000          | 15 000 000         | 14 973 860  | 6 350 000   | 2 755 000                       | 65 000 000    |
| p.m.<br>(9)   | —                | —           | 800 000<br>(8)      | 2 000 000<br>(8)   | 3 000 000   | 1 000 000   | p.m.                            | p.m.<br>(9)   |
| 67 816 118    | 25 560 353       | 12 882 349  | 14 100 000<br>(10)  | 11 000 000<br>(11) | 3 443 416   | 830 000     | p.m.                            | 67 816 118    |
| 21 200 000    | —                | —           | —                   | 6 000 000          | 11 500 000  | 3 000 000   | 700 000                         | 21 200 000    |
| 47 268 646    | 45 500 228       | 1 007 372   | 750 000             | p.m.               | 11 046      | p.m.        | p.m.                            | 47 268 646    |
| 75 000 000    | 11 680 721       | 16 765 421  | 12 800 000          | 15 000 000         | 12 623 858  | 5 800 000   | 330 000                         | 75 000 000    |
| 115 000 000   | —                | —           | 3 000 000           | 20 000 000         | 28 000 000  | 26 000 000  | 38 000 000                      | 115 000 000   |
| 750 000 000   | 435 705 274      | 137 671 761 | 91 000 000          | 55 000 000         | 30 622 965  | p.m.        | —                               | 750 000 000   |
| 1 600 000 000 | —                | 52 028 055  | 269 000 000<br>(12) | 300 000 000        | 329 377 035 | 315 513 000 | 334 081 910                     | 1 600 000 000 |
| 550 000 000   | 104 040          | 100 385 157 | 105 000 000         | 125 000 000        | 82 000 000  | 82 000 000  | 55 510 803                      | 550 000 000   |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading  | Commitments      |            |                   |                   |           |      |                                 |
|-----------------|--|------------------|------------|-------------------|-------------------|-----------|------|---------------------------------|
|                 |  | u.a./EUA/<br>ECU | ECU        |                   |                   |           |      |                                 |
|                 |  | < 1987 (1)       | 1988 (2)   | 1989 (3)          | 1990              | 1991      | 1992 | 1993 and<br>subsequent<br>years |
| 7 3 2 3         | Delta (Developing European learning through technological advance)       | —                | 1 774 229  | 15 225 771<br>(6) | 3 000 000         | p.m.      | p.m. | p.m.                            |
| 7 3 2 4         | Drive (Advanced technologies in road transport)                          | —                | 1 979 552  | 32 000 000        | 24 000 000        | 2 027 448 | p.m. | p.m.                            |
| 7 3 2 5         | AIM (Advanced informatics in medicine)                                   | —                | 431 000    | 15 069 000<br>(9) | 4 500 000         | p.m.      | p.m. | p.m.                            |
| 7 3 2 6         | Euret (transport)  | —                | —          | p.m.<br>(11)      | 1 000 000<br>(12) | —         | p.m. | p.m.                            |
| 7 3 3           | <i>Modernization of industrial sectors</i>                               |                  |            |                   |                   |           |      |                                 |
| 7 3 3 1         | Brite (Basic technological research and application of new technologies) | 103 596 616      | 80 798 926 | p.m.<br>(15)      | p.m.              | p.m.      | —    | —                               |

OP = Old programme.

CP = Current programme.

NP = New programme.

(1) Final commitments (including cancellation of commitments making appropriations available again).

(2) Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

(3) Including commitment appropriations remaining from 1988.

(4) Outturn.

(5) Including payment appropriations carried over from 1988.

(6) Including appropriations carried over from 1988 and transfer No 18 J (ECU 2 500 000).

(7) Including transfer No 10 B (ECU 5 million).

(8) Including transfer No 10 A (ECU 7 500 000).

(9) Including appropriations carried over from 1988.

(10) Including transfer Nos 13 and 18 J (ECU 1 500 000).

(11) Excluding transfer No 18 F (ECU 1 million).

(12) This appropriation is entered in Chapter 10 0.

(13) The schedule does not give detailed budget forecasts for programmes being prepared (7 3 3 3 and 7 3 8 3) or proposed (7 3 1 2, 7 3 2 6, 7 3 4 4 and 7 3 8 9).

(14) Excluding transfer No 13 (ECU 400 000).

(15) Excluding transfer No 4 C (ECU 2 800 000 in commitment and payment appropriations from Chapter 10 0).

(16) Excluding transfer No 18 J (ECU 12 million).

AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

|              |                  | Payments   |                             |                   |            |           |                                 |              |
|--------------|------------------|------------|-----------------------------|-------------------|------------|-----------|---------------------------------|--------------|
| Total        | u.a./EUA/<br>ECU | ECU        |                             |                   |            |           |                                 | Total        |
|              | < 1987 (4)       | 1988 (4)   | 1989 (5)                    | 1990              | 1991       | 1992      | 1993 and<br>subsequent<br>years |              |
| 20 000 000   | —                | 433 100    | 11 000 000<br>(7)           | 6 500 000         | 2 066 900  | p.m.      | p.m.                            | 20 000 000   |
| 60 000 000   | —                | 464 146    | 18 500 000<br>(8)           | 19 000 000        | 16 500 000 | 4 000 000 | 1 535 854                       | 60 000 000   |
| 20 000 000   | —                | —          | 10 500 000<br>(10)          | 8 000 000         | 1 500 000  | p.m.      | p.m.                            | 20 000 000   |
| p.m.<br>(13) | —                | —          | p.m.<br>(14)                | 1 000 000<br>(12) | p.m.       | p.m.      | —                               | p.m.<br>(13) |
| 184 395 542  | 26 683 748       | 44 710 776 | 41 200 000<br>(9) (15) (16) | 38 000 000        | 27 801 018 | 6 000 000 | p.m.                            | 184 395 542  |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading  | Commitments           |                     |                     |                    |             |             |                                 |
|-----------------|--|-----------------------|---------------------|---------------------|--------------------|-------------|-------------|---------------------------------|
|                 |  | u.a./EUA/<br>ECU      | ECU                 |                     |                    |             |             |                                 |
|                 |  | < 1987 <sup>(1)</sup> | 1988 <sup>(2)</sup> | 1989 <sup>(3)</sup> | 1990               | 1991        | 1992        | 1993 and<br>subsequent<br>years |
| 7 3 3 2         | Brite/Euram (Industrial manufacturing technologies and advanced materials) | —                     | 1 000 000           | 100 200 000<br>(6)  | 155 000 000        | 110 300 000 | 134 000 000 | p.m.                            |
| 7 3 3 3         | Aeronautical technology  | —                     | p.m.                | p.m.<br>(8)         | p.m.               | p.m.        | p.m.        | p.m.                            |
| 7 3 3 4         | Primary, secondary and renewable raw materials                             | OP                    | 50 402 421          | 1 627 405           | 145 950<br>(10)    | p.m.        | —           | —                               |
|                 |  | CP                    | 52 678 685          | 12 555 919          | 3 000 000          | p.m.        | p.m.        | —                               |
|                 |  | NP                    | —                   | —                   | p.m.               | 18 000 000  | 17 000 000  | 10 000 000                      |
| 7 3 3 5         | CBR (Applied metrology and chemical analyses)                              | OP                    | 9 824 159           | 10 000              | p.m.               | —           | —           | —                               |
|                 |  | CP                    | 24 698 138          | 604 640             | 205 698            | p.m.        | —           | —                               |
|                 |  | NP                    | —                   | 4 045 000           | 14 864 000<br>(11) | 15 000 000  | 15 291 000  | 10 000 000                      |

OP = Old programme.

CP = Current programme.

NP = New programme.

(1) Final commitments (including cancellation of commitments making appropriations available again).

(2) Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

(3) Including commitment appropriations remaining from 1988.

(4) Outturn.

(5) Including payment appropriations carried over from 1988.

(6) Including transfer No 4 C (ECU 100 200 000 in commitment appropriations).

(7) Including transfer No 4 C (ECU 24 100 000 and ECU 9 million entered in Chapter 10 0) and excluding transfer Nos 10 A and B (ECU 9 million in payment appropriations from Chapter 10 0).

(8) Excluding transfer No 4 C (ECU 25 million in commitment appropriations and ECU 9 million in payment appropriations from Chapter 10 0).

(9) The schedule does not give detailed budget forecasts for programmes being prepared (7 3 3 3 and 7 3 8 3) or proposed (7 3 1 2, 7 3 2 6, 7 3 4 4 and 7 3 8 9).

(10) Including appropriations carried over from 1988.

(11) Including transfer No 18 F (ECU 1 364 000).

(12) Excluding transfer No 18 J (ECU 2 700 000).

**AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)**

| Payments          |                  |            |                   |            |             |             |                                 |                   |
|-------------------|------------------|------------|-------------------|------------|-------------|-------------|---------------------------------|-------------------|
| Total             | u.a./EUA/<br>ECU | ECU        |                   |            |             |             |                                 | Total             |
|                   | < 1987 (4)       | 1988 (4)   | 1989 (5)          | 1990       | 1991        | 1992        | 1993 and<br>subsequent<br>years |                   |
| 500 500 000       | —                | —          | 25 100 000<br>(7) | 66 000 000 | 112 400 000 | 138 000 000 | 159 000 000                     | 500 500 000       |
| —<br>(9)          | —                | p.m.       | p.m.<br>(8)       | p.m.       | p.m.        | p.m.        | p.m.                            | p.m.<br>(9)       |
| 52 175 776        | 49 044 236       | 1 221 666  | 348 343           | 300 000    | 1 261 531   | p.m.        | p.m.                            | 52 175 776        |
| 68 234 604        | 9 189 016        | 22 783 881 | 16 551 657        | 10 000 000 | 9 590 050   | 120 000     | p.m.                            | 68 234 604        |
| 45 000 000<br>(9) | —                | —          | p.m.              | 4 700 000  | 11 720 000  | 11 760 000  | 16 820 000                      | 45 000 000<br>(9) |
| 9 834 159         | 9 498 787        | 65 949     | p.m.              | 200 000    | 69 423      | p.m.        | p.m.                            | 9 834 159         |
| 25 508 476        | 15 473 015       | 3 570 118  | 4 415 553         | 1 800 000  | 249 790     | p.m.        | p.m.                            | 25 508 476        |
| 59 200 000        | —                | 1 600 000  | 4 800 000<br>(12) | 10 500 000 | 18 100 000  | 14 700 000  | 9 500 000                       | 59 200 000        |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading  |    | Commitments           |                     |                      |                    |            |            |                                 |
|-----------------|--|----|-----------------------|---------------------|----------------------|--------------------|------------|------------|---------------------------------|
|                 |  |    | u.a./EUA/<br>ECU      | ECU                 |                      |                    |            |            |                                 |
|                 |  |    | < 1987 <sup>(1)</sup> | 1988 <sup>(2)</sup> | 1989 <sup>(3)</sup>  | 1990               | 1991       | 1992       | 1993 and<br>subsequent<br>years |
| 7 3 4           | <i>Exploitation and optimum use of<br/>biological resources</i>  |    |                       |                     |                      |                    |            |            |                                 |
| 7 3 4 1         | Bridge (Biotechnology)   | OP | 45 473 162            | 22 938 370          | 7 112 187<br>(6) (7) | p.m.               | p.m.       | p.m.       | —                               |
|                 |  | NP | —                     | —                   | —                    | 30 000 000         | 33 100 000 | 25 700 000 | 11 200 000                      |
| 7 3 4 2         | Eclair (European collaborative<br>linkage of agriculture and in-<br>dustry through research)                 |    | —                     | —                   | 24 200 000           | 24 300 000         | 6 500 000  | 21 600 000 | 3 400 000                       |
| 7 3 4 3         | Flair (Food-linked agro-indus-<br>trial research)  |    | —                     | —                   | 600 000<br>(10)      | 11 000 000         | 5 200 000  | 5 500 000  | 2 700 000                       |
| 7 3 4 4         | Competitiveness of agriculture<br>and management of agricultural<br>resources (research in agri-<br>culture) | OP | 26 500 386            | 3 499 614           | 350 000<br>(6)       | p.m.               | —          | —          | —                               |
|                 |  | NP | —                     | —                   | 2 000 000<br>(12)    | 21 000 000<br>(13) | p.m.       | p.m.       | p.m.                            |

OP = Old programme.

CP = Current programme.

NP = New programme.

<sup>(1)</sup> Final commitments (including cancellation of commitments making appropriations available again).

<sup>(2)</sup> Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

<sup>(3)</sup> Including commitment appropriations remaining from 1988.

<sup>(4)</sup> Outturn.

<sup>(5)</sup> Including payment appropriations carried over from 1988.

<sup>(6)</sup> Including appropriations carried over from 1988 and transfer No 18 J (ECU 2 million).

<sup>(7)</sup> Including transfer No 12 B (ECU 536 000).

<sup>(8)</sup> Excluding transfer Nos 10 B and 18 J (ECU 7 500 000).

<sup>(9)</sup> Excluding transfer No 18 J (ECU 4 million).

<sup>(10)</sup> Excluding transfer No 12 A (ECU 4 700 000) and including transfer No 11 A (ECU 600 000 from Chapter 10 0).

<sup>(11)</sup> Excluding transfer No 13 (ECU 1 million) and including transfer No 11 A (ECU 600 000 from Chapter 10 0).

<sup>(12)</sup> This appropriation is entered in Chapter 10 0, and will not be utilized; excluding transfer No 18 F (ECU 3 million in Chapter 10 0).

<sup>(13)</sup> This appropriation is entered in Chapter 10 0.

<sup>(14)</sup> The schedule does not give detailed budget forecasts for programmes being prepared (7 3 3 3 and 7 3 8 3) or proposed (7 3 1 2, 7 3 2 6, 7 3 4 4 and 7 3 8 9).

<sup>(15)</sup> Excluding transfer No 18 F (ECU 1 million).

AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

|              |                  | Payments   |                      |                   |            |            |                                 |              |
|--------------|------------------|------------|----------------------|-------------------|------------|------------|---------------------------------|--------------|
| Total        | u.a./EUA/<br>ECU | ECU        |                      |                   |            |            |                                 | Total        |
|              | < 1987 (4)       | 1988 (4)   | 1989 (5)             | 1990              | 1991       | 1992       | 1993 and<br>subsequent<br>years |              |
| 75 523 719   | 21 158 072       | 17 154 071 | 16 533 000<br>(6)    | 11 000 000        | 8 958 576  | 720 000    | p.m.                            | 75 523 719   |
| 100 000 000  | —                | —          | p.m.                 | 7 000 000         | 21 000 000 | 26 000 000 | 46 000 000                      | 100 000 000  |
| 80 000 000   | —                | —          | 5 500 000<br>(8) (9) | 16 000 000        | 18 260 000 | 19 400 000 | 20 840 000                      | 80 000 000   |
| 25 000 000   | —                | —          | 600 000<br>(11)      | 4 000 000         | 7 000 000  | 7 000 000  | 6 400 000                       | 25 000 000   |
| 30 350 000   | 13 159 439       | 2 847 703  | 4 350 000<br>(6)     | 6 000 000         | 3 992 858  | —          | —                               | 30 350 000   |
| p.m.<br>(14) | —                | —          | p.m.<br>(15)         | 7 500 000<br>(13) | 10 000 000 | 3 500 000  | p.m.                            | p.m.<br>(14) |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading   | Commitments           |                     |                     |                   |            |            |                                 |
|-----------------|---|-----------------------|---------------------|---------------------|-------------------|------------|------------|---------------------------------|
|                 |   | u.a./EUA/<br>ECU      | ECU                 |                     |                   |            |            |                                 |
|                 |   | < 1987 <sup>(1)</sup> | 1988 <sup>(2)</sup> | 1989 <sup>(3)</sup> | 1990              | 1991       | 1992       | 1993 and<br>subsequent<br>years |
| 7 3 5           | <b>Energy</b>   |                       |                     |                     |                   |            |            |                                 |
| 7 3 5 1         | Fission — Management and<br>storage of radioactive waste                    |                       |                     |                     |                   |            |            |                                 |
|                 | CP  | 50 457 014            | 9 306 770           | 1 924 000           | p.m.              | —          | —          | —                               |
|                 | NP  | —                     | —                   | —                   | 30 000 000<br>(7) | 23 900 000 | 16 000 000 | 9 700 000                       |
| 7 3 5 2         | Fission — Decommissioning of<br>nuclear power stations                      |                       |                     |                     |                   |            |            |                                 |
|                 | OP  | 10 926 385            | 1 144 623           | p.m.                | p.m.              | p.m.       | p.m.       | p.m.                            |
|                 | NP  | —                     | —                   | 8 000 000<br>(8)    | 12 500 000        | 5 900 000  | 4 400 000  | 700 000                         |
| 7 3 5 3         | Teleman (Remote handling in<br>hostile and disorganized envi-<br>ronments)  | —                     | —                   | 800 000<br>(9) (10) | 8 600 000         | 6 600 000  | 2 400 000  | 600 000                         |
| 7 3 5 4         | Thermonuclear fusion — Gen-<br>eral programme                               |                       |                     |                     |                   |            |            |                                 |
|                 | OP  | 457 776 393           | 697 950             | p.m.                | —                 | —          | —          | —                               |
|                 | CP  | 339 685 548           | 26 937 117          | 11 438 000          | p.m.              | p.m.       | p.m.       | p.m.                            |
|                 | NP  | —                     | 90 366 500          | 99 733 500          | 113 000 000       | 38 900 000 | 34 000 000 | p.m.                            |
| 7 3 5 5         | Thermonuclear fusion — Parti-<br>cipation in the JET joint under-<br>taking |                       |                     |                     |                   |            |            |                                 |
|                 | OP  | 152 018 461           | 84 241 500          | 75 481 180          | p.m.              | p.m.       | p.m.       | p.m.                            |
|                 | CP  | —                     | 8 000 000           | 10 000 000          | 79 000 000        | 62 000 000 | 16 000 000 | p.m.                            |

OP = Old programme.

CP = Current programme.

NP = New programme.

(1) Final commitments (including cancellation of commitments making appropriations available again).

(2) Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

(3) Including commitment appropriations remaining from 1988.

(4) Outturn.

(5) Including payment appropriations carried over from 1988.

(6) Including transfer No 18 J (ECU 4 million).

(7) Of which ECU 29 million is entered in Chapter 10 0.

(8) Including transfer No 4 A (ECU 7 680 000 in commitment appropriations and ECU 1 680 000 in payment appropriations from Chapter 10 0) and transfer No 18 J (ECU 200 000 in payment appropriations).

(9) Excluding transfer Nos 12 A and B (ECU 836 000) and including transfer No 11 B (ECU 800 000 from Chapter 10 0).

(10) Excluding transfer No 18 F (ECU 364 000).

(11) Excluding transfer No 13 (ECU 200 000) and including transfer No 11 B (ECU 500 000 from Chapter 10 0).



AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

| Total       | Payments         |            |                   |                   |             |            |                                 |             |
|-------------|------------------|------------|-------------------|-------------------|-------------|------------|---------------------------------|-------------|
|             | u.a./EUA/<br>ECU | ECU        |                   |                   |             |            |                                 | Total       |
|             | < 1987 (4)       | 1988 (4)   | 1989 (5)          | 1990              | 1991        | 1992       | 1993 and<br>subsequent<br>years |             |
| 61 687 784  | 19 846 704       | 17 645 420 | 11 800 000<br>(6) | 7 500 000         | 4 895 660   | p.m.       | —                               | 61 687 784  |
| 79 600 000  | —                | —          | p.m.              | 10 000 000<br>(7) | 18 000 000  | 23 000 000 | 28 600 000                      | 79 600 000  |
| 12 071 008  | 6 418 520        | 2 772 191  | 1 020 000         | 1 860 297         | p.m.        | p.m.       | p.m.                            | 12 071 008  |
| 31 500 000  | —                | —          | 1 880 000<br>(8)  | 5 139 703         | 8 890 297   | 8 210 000  | 7 380 000                       | 31 500 000  |
| 19 000 000  | —                | —          | 500 000<br>(11)   | 3 300 000         | 5 400 000   | 5 300 000  | 4 500 000                       | 19 000 000  |
| 458 474 343 | 443 505 725      | 3 030 040  | p.m.              | 2 500 000         | 6 193 156   | p.m.       | p.m.                            | 455 228 921 |
| 378 060 665 | 160 290 541      | 95 384 386 | 47 216 428        | 30 000 000        | 36 638 401  | 6 730 909  | 1 800 000                       | 378 060 665 |
| 376 000 000 | —                | 4 939 387  | 71 798 161        | 91 000 000        | 102 593 361 | 79 000 000 | 26 669 091                      | 376 000 000 |
| 311 741 141 | 152 017 500      | 84 241 500 | 75 475 650        | p.m.              | 6 491       | p.m.       | p.m.                            | 311 741 141 |
| 175 000 000 | —                | 8 000 000  | 10 000 000        | 79 000 000        | 62 000 000  | 16 000 000 | p.m.                            | 175 000 000 |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading  |    | Commitments           |                     |                              |            |            |            |                                 |
|-----------------|--|----|-----------------------|---------------------|------------------------------|------------|------------|------------|---------------------------------|
|                 |  |    | u.a./EUA/<br>ECU      | ECU                 |                              |            |            |            |                                 |
|                 |  |    | < 1987 <sup>(1)</sup> | 1988 <sup>(2)</sup> | 1989 <sup>(3)</sup>          | 1990       | 1991       | 1992       | 1993 and<br>subsequent<br>years |
| 7 3 5 6         | Joule (Non-nuclear energy)   | CP | 146 122 366           | 26 981 353          | p.m.                         | —          | —          | —          | —                               |
|                 |  | NP | —                     | —                   | 20 000 000<br><sup>(6)</sup> | 90 000 000 | 10 900 000 | 1 100 000  | p.m.                            |
| 7 3 6           | <i>Science and technology for deve-<br/>lopment</i>                        |    |                       |                     |                              |            |            |            |                                 |
| 7 3 6 1         | Science and technology for de-<br>velopment                                | OP | 41 460 825            | 567 048             | p.m.                         | p.m.       | —          | —          | —                               |
|                 |  | NP | 3 398 292             | 35 491 378          | 25 000 000                   | 14 000 000 | 2 110 330  | p.m.       | —                               |
| 7 3 7           | <i>Exploitation of the sea-bed and<br/>optimum use of marine resources</i> |    |                       |                     |                              |            |            |            |                                 |
| 7 3 7 1         | MAST (Marine research)   |    | —                     | —                   | 3 500 000<br><sup>(7)</sup>  | 33 000 000 | 3 500 000  | 10 000 000 | p.m.                            |
| 7 3 7 2         | Fisheries research programme   |    | —                     | 3 497 081           | 10 000 000<br><sup>(8)</sup> | 6 500 000  | 3 500 000  | 6 502 919  | p.m.                            |

OP = Old programme.

CP = Current programme.

NP = New programme.

<sup>(1)</sup> Final commitments (including cancellation of commitments making appropriations available again).

<sup>(2)</sup> Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

<sup>(3)</sup> Including commitment appropriations remaining from 1988.

<sup>(4)</sup> Outturn.

<sup>(5)</sup> Including payment appropriations carried over from 1988.

<sup>(6)</sup> Including transfer No 4 B (ECU 17 200 000 in commitment appropriations and ECU 8 million in payment appropriations from Chapter 10 0).

<sup>(7)</sup> Including transfer No 11 C (ECU 3 500 000 in commitment appropriations and ECU 1 million in payment appropriations from Chapter 10 0).

<sup>(8)</sup> Including transfer No 18 F (ECU 3 million).

AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

|             |                  | Payments   |                   |            |            |            |                                 |             |
|-------------|------------------|------------|-------------------|------------|------------|------------|---------------------------------|-------------|
| Total       | u.a./EUA/<br>ECU | ECU        |                   |            |            |            |                                 | Total       |
|             | < 1987 (4)       | 1988 (4)   | 1989 (5)          | 1990       | 1991       | 1992       | 1993 and<br>subsequent<br>years |             |
|             |                  |            |                   |            |            |            |                                 |             |
| 173 103 719 | 63 028 963       | 48 921 493 | 20 200 000        | 21 000 000 | 19 953 263 | p.m.       | p.m.                            | 173 103 719 |
| 122 000 000 | —                | —          | 10 800 000<br>(6) | 39 000 000 | 33 000 000 | 20 000 000 | 19 200 000                      | 122 000 000 |
| 42 027 873  | 34 402 884       | 4 644 349  | 2 040 079         | 800 000    | 140 561    | p.m.       | p.m.                            | 42 027 873  |
| 80 000 000  | 80 283           | 7 390 857  | 20 459 921        | 21 200 000 | 20 718 939 | 7 920 000  | 2 230 000                       | 80 000 000  |
| 50 000 000  | —                | —          | 1 000 000<br>(7)  | 11 000 000 | 11 500 000 | 12 000 000 | 14 500 000                      | 50 000 000  |
| 30 000 000  | —                | —          | 3 500 000         | 6 500 000  | 7 000 000  | 6 500 000  | 6 500 000                       | 30 000 000  |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading   | Commitments           |                     |                                |            |            |            |                                 |
|-----------------|---|-----------------------|---------------------|--------------------------------|------------|------------|------------|---------------------------------|
|                 |   | u.a./EUA/<br>ECU      | ECU                 |                                |            |            |            |                                 |
|                 |   | < 1987 <sup>(1)</sup> | 1988 <sup>(2)</sup> | 1989 <sup>(3)</sup>            | 1990       | 1991       | 1992       | 1993 and<br>subsequent<br>years |
| 738             | <i>Improvements to European scientific and technical cooperation</i>              |                       |                     |                                |            |            |            |                                 |
| 7381            | Science (Stimulation — strengthening European scientific and technical potential) |                       |                     |                                |            |            |            |                                 |
|                 | OP  | 6 588 792             | 152 308             | p.m.                           | p.m.       | —          | —          | —                               |
|                 | CP  | 53 204 432            | 6 710 918           | p.m.                           | p.m.       | —          | —          | —                               |
|                 | NP  | —                     | 29 017 570          | 40 000 000<br>( <sup>6</sup> ) | 35 000 000 | 24 982 430 | 38 000 000 | p.m.                            |
| 7382            | SPES (Stimulation plan for economic sciences)                                     | —                     | —                   | 1 000 000                      | 2 000 000  | 1 000 000  | 2 000 000  | p.m.                            |
| 7383            | Scientific awards   | —                     | —                   | p.m.                           | p.m.       | p.m.       | p.m.       | p.m.                            |
| 7384            | Support for major facilities  | —                     | —                   | 7 000 000                      | 8 000 000  | 8 000 000  | 7 000 000  | p.m.                            |

OP = Old programme.

CP = Current programme.

NP = New programme.

(<sup>1</sup>) Final commitments (including cancellation of commitments making appropriations available again).

(<sup>2</sup>) Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

(<sup>3</sup>) Including commitment appropriations remaining from 1988.

(<sup>4</sup>) Outturn.

(<sup>5</sup>) Including payment appropriations carried over from 1988.

(<sup>6</sup>) Including transfer No 12 A (ECU 5 million).

(<sup>7</sup>) The schedule does not give detailed budget forecasts for programmes being prepared (7333 and 7383) or proposed (7312, 7326, 7344 and 7389).

AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)

|             |                  | Payments   |            |            |            |            |                                 |             |  |
|-------------|------------------|------------|------------|------------|------------|------------|---------------------------------|-------------|--|
| Total       | u.a./EUA/<br>ECU | ECU        |            |            |            |            |                                 | Total       |  |
|             | < 1987 (4)       | 1988 (4)   | 1989 (5)   | 1990       | 1991       | 1992       | 1993 and<br>subsequent<br>years |             |  |
| 6 741 100   | 6 045 193        | 327 662    | 118 080    | 150 000    | 100 165    | p.m.       | p.m.                            | 6 741 100   |  |
| 59 915 350  | 21 120 036       | 13 888 740 | 10 481 920 | 9 000 000  | 5 424 654  | p.m.       | p.m.                            | 59 915 350  |  |
| 167 000 000 | —                | 4 409 082  | 18 900 000 | 27 500 000 | 37 690 918 | 37 200 000 | 41 300 000                      | 167 000 000 |  |
| 6 000 000   | —                | —          | 400 000    | 800 000    | 1 280 000  | 1 650 000  | 1 870 000                       | 6 000 000   |  |
| p.m.<br>(7) | —                | —          | p.m.       | p.m.       | p.m.       | p.m.       | p.m.                            | p.m.<br>(7) |  |
| 30 000 000  | —                | —          | 4 000 000  | 4 000 000  | 7 680 000  | 6 770 000  | 7 550 000                       | 30 000 000  |  |

# MULTIANNUAL SCHEDULE OF COMMITMENTS

| Article<br>Item | Heading   | Commitments      |           |           |                   |                   |            |                                 |      |
|-----------------|---|------------------|-----------|-----------|-------------------|-------------------|------------|---------------------------------|------|
|                 |   | u.a./EUA/<br>ECU | ECU       |           |                   |                   |            |                                 |      |
|                 |   | < 1987 (1)       | 1988 (2)  | 1989 (3)  | 1990              | 1991              | 1992       | 1993 and<br>subsequent<br>years |      |
| 7385            | Monitor (SAST, FAST and<br>Spear), Strategic analysis, fore-<br>casting and evaluation in mat-<br>ters of research and technology | OP               | 8 235 055 | 203 503   | p.m.<br>(6)       | p.m.              | —          | —                               | —    |
|                 |   | NP               | —         | 1 200 000 | 3 800 000<br>(7)  | 8 700 000         | 3 600 000  | 4 700 000                       | p.m. |
| 7387            | Doses (Development of expert<br>systems for statistics)   |                  | —         | —         | 500 000<br>(8)    | 1 745 000         | 755 000    | 1 000 000                       | p.m. |
| 7388            | Value (Dissemination and utili-<br>zation of scientific and techno-<br>logical results)   |                  | —         | 2 178 305 | 5 671 695<br>(9)  | 10 150 000        | 10 000 000 | 10 000 000                      | p.m. |
| 7389            | Eurotra (Machine translation<br>system)   | CP               | —         | —         | 4 650 000<br>(11) | 2 350 000         | p.m.       | p.m.                            | p.m. |
|                 |   | NP               | —         | —         | —                 | 2 000 000<br>(13) | p.m.       | p.m.                            | p.m. |

OP = Old programme.

CP = Current programme.

NP = New programme.

(1) Final commitments (including cancellation of commitments making appropriations available again).

(2) Commitments entered into against 1988 appropriations and against 1987 appropriations remaining in 1988.

(3) Including commitment appropriations remaining from 1988.

(4) Outturn.

(5) Including payment appropriations carried over from 1988.

(6) This amount will be charged to the new programme as soon as it is adopted.

(7) Including transfer No 11 D (ECU 2 600 000 in commitment appropriations and ECU 2 million in payment appropriations from Chapter 10 0).

(8) Including transfer No 11 E (ECU 500 000 in commitment appropriations and ECU 200 000 in payment appropriations from Chapter 10 0) and excluding transfer No 13 (ECU 150 000 in payment appropriations from Chapter 10 0).

(9) Including transfer No 11 F (ECU 4 450 000 in commitment appropriations and ECU 600 000 in payment appropriations from Chapter 10 0).

(10) Excluding transfer No 13 (ECU 1 million from Chapter 10 0).

(11) Including transfer No 11 G (ECU 4 650 000 in commitment appropriations and ECU 750 000 in payment appropriations from Chapter 10 0).

(12) Excluding transfer No 13 (ECU 1 250 000 from Chapter 10 0).

(13) This appropriation is entered in Chapter 10 0.

(14) The schedule does not give detailed budget forecasts for programmes being prepared (7333 and 7383) or proposed (7312, 7326, 7344 and 7389).

**AND PAYMENTS BY RESEARCH OBJECTIVES (cont'd)**

|              |                  | Payments  |                       |                 |           |           |                                 |              |  |
|--------------|------------------|-----------|-----------------------|-----------------|-----------|-----------|---------------------------------|--------------|--|
| Total        | u.a./EUA/<br>ECU | ECU       |                       |                 |           |           |                                 | Total        |  |
|              | < 1987 (4)       | 1988 (4)  | 1989 (5)              | 1990            | 1991      | 1992      | 1993 and<br>subsequent<br>years |              |  |
| 8 438 558    | 7 096 467        | 738 354   | p.m.<br>(6)           | 400 000         | 203 737   | p.m.      | p.m.                            | 8 438 558    |  |
| 22 000 000   | —                | 1 200 000 | 3 200 000<br>(7)      | 5 500 000       | 4 600 000 | 5 400 000 | 2 100 000                       | 22 000 000   |  |
| 4 000 000    | —                | —         | 200 000<br>(8)        | 1 445 000       | 1 095 000 | 905 000   | 355 000                         | 4 000 000    |  |
| 38 000 000   | —                | 166 702   | 1 500 000<br>(9) (10) | 5 000 000       | 9 500 000 | 9 500 000 | 12 333 298                      | 38 000 000   |  |
| 7 000 000    | —                | —         | 750 000<br>(11) (12)  | 3 900 000       | 2 200 000 | 150 000   | p.m.                            | 7 000 000    |  |
| p.m.<br>(14) | —                | —         | —                     | 100 000<br>(13) | 1 500 000 | 400 000   | p.m.                            | p.m.<br>(14) |  |

**Amounts in this budget document are expressed in ecus unless otherwise indicated.**

- END -

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